FAA general aviation NEWS
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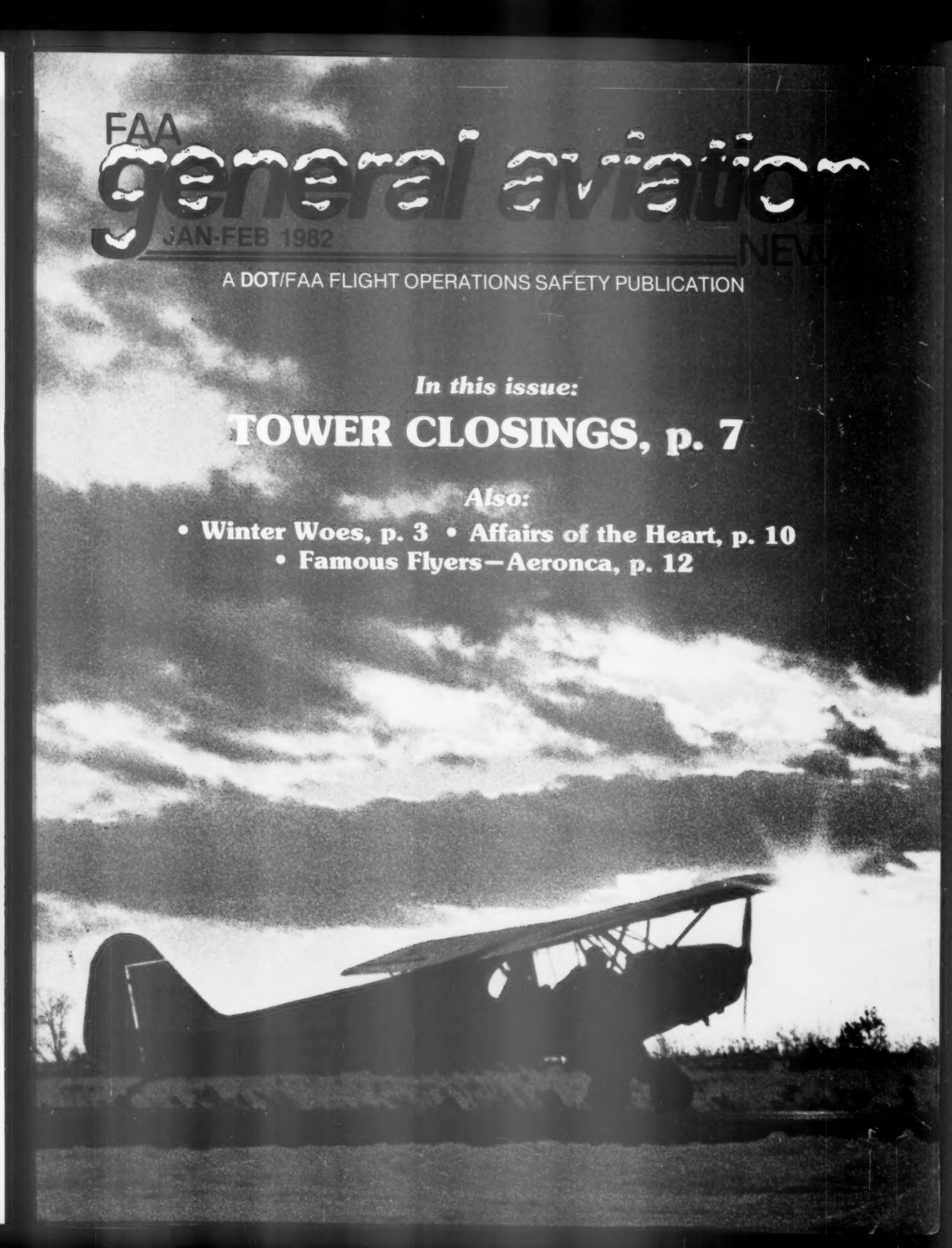

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FAA GENERAL AVIATION NEWS

**DEPARTMENT OF TRANSPORTATION/
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BRIEFS

MODERN AIRSPACE. A multi-purpose plan for modernizing national airspace services over the next two decades has been proposed by FAA. Some highlights:

- A new generation of secondary radar, making possible selective radar communication between controller and aircraft using Mode "S" transponders.
- Direct pilot access to actual weather conditions via computer terminals on the ground, and aloft via the "S" transponder.
- Nationwide installation of the microwave landing system (1,250 units) for safer, fuller utilization of busy airports.
- Consolidation of en route centers and terminal radar control, for greater efficiency in air traffic services.

Copies of the 450-page National Airspace System Plan may be purchased for $9.75 from FAA Airway Facilities, AAF-10, 800 Independence Ave., SW, Washington, DC 20591.

INSTRUMENT CHANGE. An amendment to Part 61, effective January 25, 1982, permits applicants for an instrument rating to apply toward the rating any cross-country IFR experience gained in <u>any</u> category of powered aircraft. Previously they could count only cross-country IFR time in the category of aircraft for which the rating was sought.

OFF CENTER. Additional routes have been added to "tower en route control," a procedure which allows the pilot of a non-jet aircraft flying below 10,000' to get tower-to-tower clearance between two or more adjacent approach control facilities. This practice eliminates communicating with en route centers for short tower-to-tower trips, lessening the workload for both pilot and controller and expediting traffic flow. IFR-rated airmen will receive letters from their respective regional offices listing specific routes, altitudes, and city-pair combinations. Until you receive the letter, check the Airport/Facility Directory or local FSS for this information.

A NEW TRANSITION. To protect the instrument approach at Scott Municipal Airport in Parson, TN, the air traffic service has established a transition area within an 8.5 mile radius of the airport, effective late last year. Controlled airspace at Scott now begins at 700' AGL. Consult NOTAMs for depiction.

Winter Woes

Why flying over mountains in winter takes such a heavy toll of airmen.

Flying over mountainous country in the winter, in contrast to the warmer seasons, has some obvious advantages for the light plane pilot. For example, the engine puts out more power, density altitude is in his favor, and frozen terrain often promotes the existence of clear, stable air. On the other hand, there are some disadvantages. Icing levels are lower and may exist close to the surface. Cold fronts tend to move in faster than in summer. Snow can obliterate landmarks as well as the horizon, and make it difficult to find safe emergency landing fields.

These pros and cons tend to balance out somewhat evenly, but there is one factor which is always an overriding concern: *If you go down in the mountains while they are in the grip of winter, will you be rescued in time to survive?*

Accidents of this type have a high fatality rate. For the three midwinter months of December 1979 through February 1980, for example, there were 18 en route accidents in the upper elevations of the predominantly mountainous states in the west. Fourteen of these accidents were fatal—an accident rate about three times as high as that for all of general aviation. These 14 fatal accidents accounted for 36 fatalities.

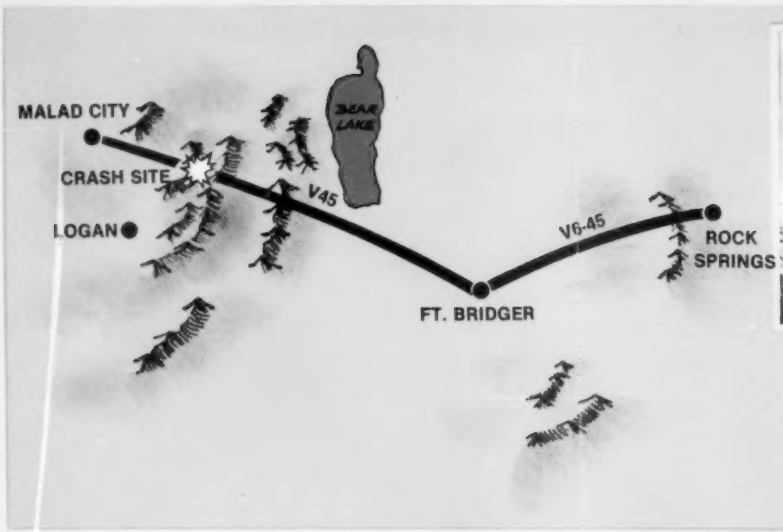
The required installation of emergency locator transmitters in general aviation aircraft reduces—but does not eliminate—delays in finding downed aircraft. Since the ELT signal is essentially line of of sight, effective transmitting can be severely limited if an aircraft crashes in a narrow canyon, or slides into a ravine. Occasionally a severe crash may damage the ELT beyond function ability. Even when the signal has been heard, snow cover can obliterate the wreckage, hindering search efforts. Sometimes a small avalanche is triggered by the crash impact, burying the aircraft and hiding it from sight until months after the search and rescue operation has been terminated. In extremely cold weather, survivors of a mountain crash may succumb quickly to injuries or exposure.

Pilots who plan to transit mountains to reach their destinations often do not realistically consider the possibility of a forced landing in winter in desolate terrain, and fail to carry warm clothing, food, and survival gear—or stow what they do carry in compartments where it may be inaccessible after a severe impact.

In December of 1979, a family of five departed Longmont, CO for a Christmas vacation trip to Southern California in a light twin *Apache*. The pilot attempted to outclimb a 13,000′ peak, got caught in a downdraft, and crashed near Grand Lake, CO in Rocky Mountain National Park. The pilot and his three teen-aged daughters survived the impact, and their ELT activated. However, because of the high, rugged wilderness terrain, rescue parties could not reach them until two days later, following 48 hours of below-freezing temperatures. Subsequent to the accident, the pilot had both legs amputated because of frostbite suffered during the wait.

Another December accident occurred at White Pass, WA, 35 miles west of Yakima, when a *Comanche* iced up and went down in the Goat Rocks Wilderness Area, with a family of four. After a week of extensive air and ground searching, rescue efforts were discontinued when severe snow storms set in. The wreckage was not found until some hikers accidentally came upon it the following September.

Investigation determined that the ELT had not been properly armed and did not operate. Had the occupants survived the impact, their continued survival would have been in doubt. There were no extra blankets, survival gear, or



Sketch map of *Cherokee's* route from Rock Springs, WY over Wasatch National Forest. Crash site was close to ridge top.

food on board, nor any winter clothing.

Two years ago a 32-year old missionary minister was returning to Eugene, OR from a Christmas holiday trip to Greenville, SC with his family in a *Cherokee* 180. The aircraft had been acquired for missionary work in the Philippines, and the pilot had logged 372 hours. He had also received an A&P certificate so that he could maintain the aircraft himself. He held a private pilot certificate and a recently awarded instrument rating. He was accompanied on the South Carolina trip by his two daughters, aged 11 and two, and his 32-year old wife, also a missionary, who was expecting their third child in April.

The return flight across the country was accomplished in a series of routine legs as far as Rock Springs, WY. Up to this time all the flying had been accomplished in good weather. They were all eager to get back to school and church commitments in Oregon. At 9 a.m. on the morning of January 12, the pilot telephoned the FSS at Rock Springs-Sweetwater County Airport for a weather briefing. He gave his route of flight as Rock Springs to Fort Bridger, WY on Victor 64S; to Malad City, Idaho on Victor 4S; then a northerly heading to Pocatello. The flight would cover about 220 nautical miles, over sparsely populated, rugged, high terrain. The high, flat plateau between Rock Springs and Fort Bridger later gave way to the 10,000′ eastern ridges of the Wasatch Range at the Wyoming-Utah border.

Rock Springs flight service station informed the pilot that airports along his proposed route were reporting low ceilings, mostly between 1,000 and 3,000 feet, with visibilities three to five miles. Malad City (elevation 4,500′ MSL) was reporting 600 feet obscured, visibility one mile in light snow and fog for the 0900 MST observation. The pilot also received information that the icing level along his route was forecast to be at or near the surface. Winds aloft at 9,000 feet were forecast to be predominantly out of the west-southwest at 15 up to 60 knots, increasing with altitude.

At 10 a.m. the pilot came in person to the Rock Springs FSS to get an updated weather briefing. VFR flight was not recommended because of the icing, possible obscurement in the mountains, and severe turbulence and wind shear that were forecast along his route. At the time of the second weather briefing icing conditions were reported by PIREP to be moderate or less, but the current area forecast called for possible severe icing in Wyoming, Utah, and Idaho. Cloud tops in the mountains were reported to be at 20,000′ or more with bases as low as 3,000′ AGL. The pilot said that since Rock Springs had VFR to Fort Bridger and see how it looked along the way. If it looked all right he would continue. He would open an IFR flight plan en route if necessary.

The minister-pilot's departure was preceded by another pilot (flying the same route) in a *Skylane*, who reported encountering a light snowshower which lasted about 10 minutes. At 8,500′ he was clear of clouds with good visibility and ground reference. As per a preflight agreement between the two men, he called the *Cherokee*, now also airborne, and reported his situation. After leaving Fort Bridger VOR, some 63 miles from Rock Springs, the *Skylane* pilot radioed the minister that the ceiling appeared to be coming down. At this point the two aircraft were about 30–40 miles apart. About 20 miles beyond Fort Bridger, the *Skylane* pilot radioed the *Cherokee* pilot again and advised him he was going IFR. This was the last communication between the two pilots. Soon afterwards the *Skylane* encountered "moderate to severe" turbulence and light rime icing. The turbulence worsened as the pilot neared Logan, UT, culminating in prolonged up and downdrafts. He was relieved to arrive safely at Pocatello.

The missionary family in the *Cherokee* reached Fort Bridger at 12:16 p.m. after also battling strong headwinds and turbulence. The pilot contacted Salt Lake and was given an IFR clearance for 12,000 feet, the minimum enroute altitude between Fort Bridger and Malad City. (The *Cherokee*, with a service ceiling of 13,750′, would not be able to go much higher than 12,000, and there was no supplemental oxygen on board.)

At 1:34 p.m. the pilot reported to Salt Lake Center that he was icing up badly in clouds and was unable to hold altitude. He requested a terrain advisory. Center radar showed the *Cherokee* at 11,000 feet, approximately 1,500 to 2,000 feet above the terrain. Logan, UT airport was 15 miles away at his 10 o'clock position. The pilot requested and was given vectors to Logan. (At this point the *Cherokee* pilot was traversing the northern end of the Wasatch Mountain Range that runs the length of Utah and bisects the state. Its high spiny ridges—lowest 9,000 feet, highest nearly 12,000 feet—are called Utah's Backbone.)

At 1:43 p.m. radar contact with the *Cherokee* was lost and a Frontier Airlines flightcrew reported hearing an ELT signal near Logan. The Cache County (UT) Sheriff's office in Logan dispatched deputies on foot and in snowmobiles to the approximate location of the last radar return—Logan Canyon near Tony Grove Lake, elevation about 9,000 feet. They were coordinating with an Air Force C-130 that had taken off from nearby Hill AFB and was attempting to home in on the ELT signal. Searchers, under

Fatal Winter Accidents in the Six Western Mountainous States December 1979—February 1980*

STATE	FATAL ACCIDENTS	FATALITIES
California	6	17
Montana	2	5
Utah	2	5
Washington	2	5
Colorado	1	1
Oregon	1	3
TOTAL	14	36

*Based on figures from the National Transportation Safety Board

East wall of Logan Canyon, UT. Cache County Sheriff Doug Bodrero, led massive search for downed plane, hidden by snow avalanche.

the direction of Cache County Sheriff Doug Bodrero—a veteran of many mountain rescues—established a base camp in Logan Canyon at the turnoff for Tony Grove Lake. More than 50 searchers checked into the camp.

Daylight faded rapidly as a heavy snowfall spread over the area. There was already 10 feet of snow on the ground, and temperatures were expected to drop down to zero overnight. Finding the aircraft and its occupants quickly was essential, and the search continued into darkness.

Then suddenly at 10 p.m., the ELT signal stopped, forcing a halt to the search.

The next day brought zero visibility in fog and blowing snow—bogging down snowmobiles and grounding aircraft. For nine days teams on snowshoes continued to search, but eventually the avalanche danger and the depth of the snow cover brought everything to a halt.

The rest of that winter and throughout the Spring, the Sheriff and his volunteers looked around Logan Canyon every chance they had, but found no sign of the lost aircraft. The thaw came late that year—not until mid-June. On July 5, 1980, two mounted deputies came across the downed *Cherokee* on a patch of still unmelted snow in a high, narrow canyon *about 100 yards from where one search team had spent the night.* The four occupants had perished from exposure. The pilot, dazed or in shock, had extricated himself from the wreckage, perhaps with the intention of seeking help. His body was found slumped over the horizontal stabilizer. Investigators theorized that the aircraft crash had precipitated a small avalanche which buried it below the reach of probing poles. The ELT battery's replacement date had expired nearly a year before the crash, explaining the early signal failure.

Clearly, mountain terrain is inhospitable to downed flyers in the winter. Because of this unlikely but always possible predicament, pilots should consider *before every* flight what they would do if they were to have a forced landing at any point along their route. The option of going IFR if necessary is no assurance of avoiding trouble, as the accidents cited above indicate. There are limits to the degree of turbulence light aircraft can handle, and areas of known icing are always to be avoided. Attempts to outmaneuver the weather are invitations to trouble.

Given the problem of surviving a crash in winter, pilots are advised to be much more conservative in their flight planning in this season.

Nevertheless, many of the factors which determine flight safety and survivability are within the pilot's control. For example:

- **Clearing Mountains.** Snow-swaddled mountains are beautiful to behold from the air, and pilots are often tempted to cross them with minimum altitude clearance. But downdraft turbulence is invisible as well as unpredictable: a safe rule of thumb for crossing mountain ridges and peaks is *their elevation plus 50%.* That means if the terrain reaches up to 10,000' and you do not have the ceiling capability or the supplemental oxygen to travel at 15,000', do not go.
- **Icing.** When icing is reported near the surface and clouds extend upwards near your service ceiling, stay on the ground.
- **Turbulence.** Do not fly into any weather stronger than light turbulence. The possible combination of structural icing (as a result of being carried into icing levels against your intentions) is an especially serious threat in winter.
- **ELT.** Be absolutely certain your equipment is functional, armed, and equipped with a suitable fresh battery before you take off. Carrying a second portable transmitter in the cabin can be a lifesaver, at a relatively small cost.
- **Sectional Charts.** Even if you fly IFR, you will want to know where you are at all times relative to the nearest peak. Frequently aircraft in clouds have crashed within less than 100 feet of a ridge or peak top.
- **Survival Gear.** Always give it priority over ski equipment, Christmas presents, fashionable clothing, etc. Visualize yourself camping out in subfreezing weather and supply yourself accordingly. For example, ski equipment, which is often heavy or bulky, can usually be rented on the scene once you get there.

The importance of survival gear is reflected in a recent accident near Yosemite, CA. According to newspaper reports, after a New Year's skiing holiday, a pilot, his wife and her 11-year old son departed Mammoth Lakes, in the High Sierra mountains of northern California, on January 4, 1982. Their homeward flight, to Concord, CA, would take their single-engine Grumman *Tiger* northwest toward Mono Lake and over Yosemite National Park, surrounded by 13,000' peaks. Over Tioga Pass, some 87 miles east of Stockton, the pilot reported encountering severe (1,500 fpm) downdrafts and was unable to maintain his assigned 12,000' altitude. The *Tiger* crashed at the 9,941' level of Tioga Pass. Search efforts were initiated as soon as radar contact was lost, but severe winter storms prevented immediate rescue. The two adults were killed on impact, but the boy survived in −15° temperatures with a wind chill factor of −60° for five days by huddling inside sleeping bags the pilot carried on board. ■

Additional Considerations for Winter Mountain Flying

- *Portable Radio*—a second ELT or a CB
- *Supplemental Oxygen*
- *Winter Survival Kit*—including blankets, matches, flares, candles, etc.
- *Sectional Charts*—for *all* areas to be overflown, with peak and ridge heights clearly indicated
- *Warm Clothing and Boots*—either worn or at hand

Tower Closings

Fewer controllers means a reduction in Air Traffic Services at airports. How to cope on your own.

QUESTION: *We've had a lot of confusion at our airport, since the tower closed down on Sundays, and one pretty serious near-collision when an airplane was landing at one end of the runway and another plane was taking off from the opposite end. There was low fog over the airport and the visibility wasn't too good. Everyone's asking questions about how we are supposed to do things differently when the tower is closed. Like, who decides what is the active runway, or the direction of pattern traffic? What about IFR operations—how do you get your clearance? What about the control zone and weather observing? Who does the weather observing? What frequency do we use on the radio to find out where everyone is? We need a little help.*

As of January 4, 1982, 66 airport traffic control towers have been temporarily closed in the United States, following reassignment of personnel to cope with staffing problems arising from the PATCO controller work stoppage of August 3, 1981. At a number of other airports, tower operating hours have been altered. The closing of a tower temporarily, or for certain hours of the day, does not interfere with safe flight operations, provided that airmen follow the appropriate regulations and procedures.

When a tower is not operating, the concept known as the airport traffic area is no longer in effect. The airport traffic area, which is not shown on charts, is a circular area within a radius of five statute miles from the geographic center of any airport at which a control tower is operating. The area extends up to but does not include 3,000′ above the elevation of the primary airport. According to FAR 91.85, unless otherwise authorized by ATC no one may operate an aircraft within an airport traffic area except for the purpose of landing at or taking off from an airport. Furthermore, FAR 91.87 specifies that within this area no one may operate an aircraft *to, from* or *on* an airport having a control tower unless two-way radio communications are maintained.

When the tower is closed, the airport traffic area no longer exists, and these regulations no longer apply. This calls for special alertness for aircraft which may legally overfly the airport at any safe altitude without radio communication. Continued use of the radio in the vicinity is strongly recommended, although it is not mandatory. The absence of tower services means

that the selection of runway and the sequencing of traffic must be arranged cooperatively among the pilots concerned, taking into account local procedures.

When an airport is operating without the services of a control tower, Part 91.89 requires pilots approaching to land to make all turns to the left—or to the right if so indicated by approved light signals or visual markings or official NOTAMs; and that helicopters approaching to land are required to avoid the flow of fixed-wing traffic. Special airport rules and FAA traffic patterns have been established by regulation at certain airports, as indicated under FAR Part 93. (Addison, TX; Flushing, NY; Kechikan, AK; Lorain County, OH; Portland, OR; and Valparaiso, FL etc.)

Note that recommended traffic patterns are not regulatory at most uncontrolled airports, which means that pilots must anticipate possible traffic from all quadrants, and turns in either direction by departing airplanes.

Note that airports which go from full-time to part-time tower operations—or have a tower shut down temporarily—may or may not display appropriate turn-direction markings. In a few cases such airports may have dual runways, where turns in opposing directions have been authorized by the tower when it was active. Current landing and takeoff procedures recommended by management at these airports will be available from the nearest flight service station.

For the pilots who are based at busy airports and used to being sequenced by the tower, the absence of tower services can mean an unaccustomed burden of responsibility in determining the position of other aircraft—and in making one's own position and intentions known. Appropriate use of radio reporting is essential while approaching the airport on arrival before entering the pattern, and before turning on legs in the pattern; and on departure before taking the runway and while within 10 miles of the airport. The possibility that some pilot may not be using the appropriate radio frequencies, or may not be using a radio at all, must be considered always. Before taking off, approach paths from either end of the runway must be scrutinized. Departures from intersecting runways or runways with a crowned area that renders one end of the runway invisible from the other end should be executed with extreme caution.

For establishing aircraft position and intentions, use of the tower frequency is recommended even when the pilot knows that the tower is not functioning and the FSS is open. Some pilots may not be aware of a tower closing, or of the FSS' existence, and communicate solely on the tower frequency. If there is a flight service station, it should also have the tower frequency. (On the rare occasions when it does not, the appropriate frequency for pilot use will be given by NOTAM available at the nearest operating FSS.)

When a tower is not open but a flight service station is operating at the airport, the FSS provides certain advisories to aircraft preparing to depart an airport and approaching to land. The FSS should be contacted and will respond—*on*

RECOMMENDED OUTBOUND AND INBOUND RADIO REPORTING FOR OPERATIONS AT AN AIRPORT WITH A TOWER THAT IS CLOSED

Recommended Traffic Advisory Practices—It is important that all aircraft transmit/receive on the same frequency while taking off or operating in the traffic pattern. As standard operating practice all inbound traffic should continuously monitor the appropriate frequency* from 10 miles to landing. Departing aircraft should monitor the frequency from start of taxi until 10 miles from the airport, unless local procedures or FARs require otherwise. (See the Airport/Facility Directory, aeronautical charts, or DOD Flight Information Publications for frequencies in use.)

OTHER FACILITIES AT AIRPORT	FREQUENCY	BROADCAST POSITION OUTBOUND	BROADCAST POSITION INBOUND
(1) Flight Service Station, UNICOM	Communicate with FSS on tower Frequency* for Airport Advisory Service unless otherwise informed by NOTAM.	Before taxiing and taking runway for takeoff.	10 miles from airport, entering downwind and final
(2) UNICOM (FSS Closed)	Broadcast position or intentions in the blind on tower frequency.*	Before taking runway for takeoff.	Entering downwind and final.
(3) None	Same as (2)	Same as (2)	Same as (2)

* Check NOTAMs in advance to learn whether another frequency has been specified.
** For wind direction and runway in use, communicate briefly with UNICOM.
NOTE: If tower temporarily closed use tower local control frequency for traffic advisory practices unless another frequency is specified in applicable NOTAM. If broadcast of position or intentions in the blind (self-announce) if used and a UNICOM is in operation at the airport, it is suggested the wind direction and runway in use be obtained from UNICOM even though tower frequency is used for self announce procedures.

Communication with an FSS—Establish two-way communications before transmitting outbound or inbound intentions and information. In communicating with an FSS, except for scheduled air carriers and other civil operators having authorized call signs, departure aircraft should state the aircraft type, full identification number, type of flight planned; i.e., VFR or IFR, and the planned destination or direction of flight. If communications with a UNICOM is necessary after initial report to FSS, return to FSS frequency for traffic update.

Information Furnished by FSS—An FSS provides: wind direction and velocity, favored or designated runway, altimeter setting, known traffic, notices to airmen, airport taxi routes, airport traffic pattern information. These elements are varied so as to best serve the current traffic situation. Some airport managers have specified that under certain wind or other conditions designated runways are used. Pilots using other than the favored or designated runway should advise the FSS immediately.

Caution: All aircraft in the vicinity of an airport may not be in communication with the FSS.

Recommended Phraseology for Communicating with an FSS:

(1) Departures—example:

Aircraft: JOHNSON RADIO COMANCHE SIX ONE THREE EIGHT, ON TERMINAL BUILDING RAMP, READY TO TAXI, VFR TO DULUTH OVER.

FSS: COMANCHE SIX ONE THREE EIGHT, JOHNSON RADIO, ROGER, WIND THREE TWO ZERO AT TWO FIVE, FAVORING RUNWAY THREE ONE, ALTIMETER THREE ZERO ZERO ONE, CESSNA ONE-SEVENTY ON DOWNWIND MAKING TOUCH AND GO LANDINGS ON RUNWAY THREE ONE.

Note that the FSS does not clear the pilot when he is to take off. He must determine that himself. The takeoff time should be reported to the FSS as soon as practicable. If the aircraft has limited equipment, and immediately after takeoff it is necessary to use the radio for navigation in lieu of communications, advise the FSS of this before changing frequency. In such cases, advisories will be transmitted over the tower local control frequency and the navigation aid frequency.

the tower frequency. On the few occasions when this is not possible, an alternate frequency will be advertised by NOTAM.

If the only facility open at an airport with a closed tower is UNICOM, broadcast your position and intentions in the blind on the tower frequency. Obtain the runway in use and wind information from the UNICOM station, then return to the tower frequency for traffic information and remain with it until well away from the airport or at the ramp.

If there is **no ground facility** functioning at the airport, use the tower frequency for "self-announcing"—or broadcasting position and intentions in the blind.

Most airport control towers are located within a *control zone*. A control zone may include one or more airports and is normally a circular area within a radius of five statute miles and includes any extensions necessary for instrument approach and departure paths. It extends upward from the ground to the base of the Continental Control Area (14,500').

The control zone, indicated on sectional charts by a dashed blue line, provides an area of controlled airspace for protection of aircraft operating to or from an airport under instrument flight conditions. from to destination airport, for aircraft on instrument flight plans. Unless authorized by ATC, VFR aircraft may not operate within a control zone when the visibility is less than three miles or the ceiling is less than one thousand feet.

Closing a tower temporarily may not affect the status of a control zone. Instrument approaches and departures will probably be handled by the nearest functioning Approach Control, or by the en route center. IFR clearance would be given directly to the pilot by radio or via a FSS. In some cases it may be necessary for a pilot on the ground to telephone Approach Control or the Center for his clearance.

In the absence of tower control, the VFR pilot must look out for aircraft descending out of clouds on an IFR approach and possibly a landing which may not include standard pattern entries or turns. Similarly pilots making IFR approaches, on breaking out of clouds at an airport with a closed tower, should anticipate the presence of uncontrolled aircraft, which must be seen and avoided.

When the tower is closed and there is no functioning flight service stations, **how are the local weather conditions obtained?** In the absence of a qualified weather observer on the ground, general aviation pilots are authorized to determine visibility. Also, even though there is no reported ceiling in this case, all pilots are still responsible for maintaining the appropriate distance from clouds as outlined in 91.105. (Air carrier operations require reports from a qualified observer.) If any qualified observer at an airport is providing information for the Air Traffic Service, that data must be used as a basis for all operations at that airport.

The monitoring of the landing system NAVAIDs at an airport may be effected when a tower is closed. NAVAIDs have internal monitoring, which means that if errors of a given magnitude develop the equipment will shut itself down automatically. Most NAVAIDs are also remotely monitored by staffed facilities, such as FSS or towers, so that pilots may be alerted to NAVAID failure. Where the only remote monitoring facility is the tower, certain instrument approaches may not be authorized as alternate destination approaches for an instrument flight plan, if the tower is not scheduled to be functioning at the pilot's estimated time of arrival. Consult the current FDC NOTAMs, which identify these approaches. (Flight service stations located further than 400 miles from the proposed alternate may not carry this information.)

Note also that an airport with one or more IFR approaches which are not authorized as al-

AS OF JANUARY 4, THE FOLLOWING AIRPORT TRAFFIC CONTROL TOWERS ARE TEMPORARILY CLOSED.

AL — Tuscaloosa
AR — Hot Springs
(temp. ATCT from 2/5-4/11/82)
Pine Bluff
West Memphis
AZ — Flagstaff
CA — Chico
Fresno (Chandler)
Imperial
Lancaster
Maryville
Merced
Riverside
San Diego (Brown)
Santa Maria
CT — Danbury
Groton
FL — Dade-Collier (Miami)
St. Petersburg (Albert Whitted)
GA — Athens
Brunswick
Valdosta
IL — Danville
Galesburg
Marion
IN — Bloomington
Muncie
KS — Salina
Topeka (Billard)
KY * Owensboro
Paducah
LA — Alexandria
Shreveport
MA — Beverly
*** Falmouth (Otis AFB—ATCT only)
Lawrence
Martha's Vineyard
New Bedford
Worcester
MI — Ann Arbor
Benton Harbor
MS — Greenville
Jackson (Hawkins)
MO — Cape Girardeau
Joplin
NE — Grand Island
NH — Lebanon
NM * Farmington (eff. 1/11/82)
Hobbs (city plans to operate)
Santa Fe
NC — Hickory
New Bern
OH — Akron (Muni)
Cleveland (Cuyahoga)
OK — Ardmore
* Enid
OR — Pendleton
PR — Mayaguez
Ponce
SC — North Myrtle Beach
Spartansburg
TX — Laredo (city plans to operate)
McAllen
Plainview
San Antonio (Stinson)
TN — Knoxville (Downtown)
WV — Lewisburg

In addition, 14 towers were closed and since reopened when resources became available to resume services at these locations. They are:

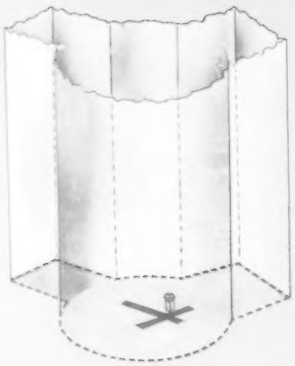
CA —El Monte
Oakland (North)
Oxnard
Palo Alto
Salinas
San Carlos
San Jose
(Reid-Hillview)
HI **Molokai
ID —Twin Falls
NV —North Las
Vegas
NJ —Morristown
NC —Kinston
TX —Harlingen
WA —Olympia

* Local or state governments have leased FAA facilities on a short-term basis and are providing contract service.
** Airport advisory service only being provided from the ATCT. Facility still NOTAMed closed until control service is resumed.
*** Military assumed operation of ATCT only. FAA had staffed under a reimbursable agreement.

ternates when a NAVAID goes out may have other approaches that may be legally usable. Consult the approach plates.

Pilots, like all human beings, are largely creatures of habit. Those of us who are accustomed to being neatly vectored and sequenced around the pattern everytime we go flying may find ourselves a little rusty when landing at airports where this service is no longer offered, and aircraft appear to be coming out of the sky from all directions. But uncontrolled does not mean out-of-control. If we go by the book, remember to look sharp, listen well and speak up promptly on a common radio frequency, we can learn to share the air safely without being led by the hand.

After all, no more than one airport in 20 ever had a control tower. ■



CONTROL ZONE

Zone extends upward to floor of Continental Control Area (14,500'). VFR flight requires 1,000' ceiling, visibility three miles, separation from clouds 2,000 horizontally, 1,000' above, 500' below.

When tower is closed and no FSS available, broadcasting position and intentions in the blind on the tower frequency provides a common "party line" communications link for all pilots operating in the area.

Affairs of the Heart

Medical falsification is a dangerous kind of deception

Is flying a stressful activity?

In the view of the Federal Air Surgeon, Dr. Homer L. Reighard, flying does not impose harmful stress either on the professional pilot or the general aviation pilot who is properly qualified medically. However, flying does involve periods of peak stress which could bring on sudden incapacitation in persons who are suffering from certain types of disease, notably heart disease. A study of 600 accidents, occurring from 1965 to 1975 and attributed by the National Transportation Safety Board to pilot incapacitation, showed that apart from alcoholic impairment, cardiovascular disease was the most frequent cause factor (58) in these accidents.

Investigators are not certain that stress was always the precipitating factor which triggered the incapacitation. Medical records show that many forms of incapacitation from cardiovascular failure, or from epileptic seizures, take place when the individual is at rest or even asleep.

On the average, about half a dozen pilots every year experience heart attacks while flying—mostly in general aviation. Most of these attacks are fatal. With air carriers the crew is usually able to manage a safe landing without difficulty—in many cases the passengers are unaware of any problem on the flight deck. In general aviation the problem is usually more serious, as the stricken pilot is often the only qualified airman on board, and the likelihood of a serious or fatal crash is much greater.

In 1979, for example (the latest year for which we have complete data), there were five accidents involving general aviation pilots who suffered inflight heart attacks and four were fatal. In two of these cases the ensuing crash also took the life of another occupant. Six air carrier pilots suffered heart attacks or partial incapacitation from cardiovascular problems in 1979, but in all except one instance the aircraft was landed safely without injury or damage. In 1979 there was also a general aviation accident resulting from an epileptic seizure in which the pilot and his passenger both died.

Dr. Reighard believes that the medical standards for pilots are adequate as they can be, in practical terms, to protect passengers and pilots against the danger of inflight incapacitation. However, he is concerned about harmful consequences that have occurred, and may continue to occur, when pilots make false statements on medical applications, or otherwise ignore the regulations designed to uphold the medical safety standards.

A recent accident at Little Rock, AR on October 28, 1981, is a case in point. The flight, in an *Aero Commander*, had initiated at Hot Springs, AR with a 55 year old pilot at the controls accompanied by two passengers, who were non-pilots. About 60 miles south of Little Rock, at an altitude of 2,500 feet, the pilot started coughing and asked the younger of his two passengers if he could fly the plane—and then passed out. The passenger, who was interested in flying and had been told something about aircraft controls, took over, managed to hold the airplane fully straight and level, and radioed for help.

With the assistence of air traffic control and a flight instructor who maneuvered alongside in another aircraft, the young passenger was able to fly all the way to Little Rock and land safely at Adams Field. The stricken pilot died en route.

The subsequent investigation disclosed that the pilot had suffered a heart attack in 1972, a cardiovascular condition, and was denied airman medical certification in 1974. The pilot applied again in 1976, stating in his application that he had no previous history of heart disease. When this statement was compared with stored computer data, the medical certificate was again denied. In 1978, and again in 1980, the pilot managed to obtain medical certification by concealing his history of heart disease and altering

his social security number in a way that prevented computer matching of previous data. (The investigation after the accident readily uncovered these acts of concealment.)

Apparently the pilot had never bothered to request an exemption or appeal FAA's decision to deny him an airman's medical certificate. Dr. Reighard stated that "we might have found it possible to grant an exemption, under some sort of limited privileges, particularly if he had his blood pressure under control. We would have followed his condition carefully and chances are we would have been able to call his attention to progression of the disease before it produced a fatality and endangered the lives of other persons."

Outright falsification of medical records is not the only means by which pilots, in their eagerness to continue flying, seek to evade the medical standards established for flight safety. Part 91.11 (a) (3) of the Federal Aviation Regulations expressly forbids any person from acting as a flight crew member while using any drug "that affects his faculties in any way contrary to safety." Flight surgeons generally believe that virtually any drug or medicine may fall into this category.

Certain drugs used to control blood pressure or any aspect of cardiovascular disease are capable of producing side effects which could reduce the pilot's ability to control an aircraft. Their usage should be reported not only on the medical application but to an aviation medical examiner at any time when they are prescribed by a physician or indicated by a current condition.

Ignoring this requirement has resulted in the unnecessary death of many innocent persons. On June 27, 1978, for example, a Piper *Cherokee* departed Hebbronville, TX for a flight to El Paso, with the pilot and one passenger on board. No flight plan was filed, but in response to inquiries the following day, the aircraft's wreckage was found by a Coast Guard helicopter 43 nautical miles southeast of Laredo. Both occupants received fatal injuries on impact. There was no indication of pre-impact malfunction of the aircraft.

Pilot incapacitation was suspected, but not proven because an autopsy was not authorized. However investigators found a bottle of pills containing propranolol, dated the previous week and prescribed for the pilot. The drug is routinely prescribed for hypertension and cardiac arrythmia.

Further investigation showed that while this pilot held only a student pilot certificate, he had applied for and received a third class medical certificate in 1976, at which time he had indicated no history of heart disease or hypertension.

On June 17, 1979, a DeHavilland commuter twin with eight passengers and two crew members crashed into a wooded area on Cape Cod while attempting to land at the Hyannis, MA airport. The captain was killed; the copilot and six passengers were seriously injured; and the aircraft was destroyed. The accident occurred at 10:48 p.m., when the weather report for the airport indicated ceiling indefinite 200 feet, visibility ¾ mile, fog and light drizzle. Pilots of two aircraft which preceded the DeHavilland reported breaking out of the clouds at the approach minimums (293 ft.) and experiencing "good" visibility under the clouds. An investigation by the National Transportation Safety Board found no evidence of mechanical failure in the aircraft or the airport NAVAIDs which could have contributed to the accident. Probable cause was ascribed to a "gross deviation from acceptable approach parameters"...

However, the Safety Board also cited the "degraded physiological condition of the captain" as a major contributing factor. The captain, 60, had a history of hypertension requiring antihypertension drugs, and had been denied a medical certificate in 1968 when an examination revealed unacceptably high blood pressure readings. A class I medical certificate had been re-issued at six month intervals between 1970 and 1974. The captain's latest application stated, according to the Board, that he "currently was not using any medicines and had never been denied an airman's medical certificate." The post-accident investigations disclosed that the captain was taking two prescription drugs: polythiazide prescribed in 1967 for hypertension and allopurinol, initiated in 1976 to counteract gout caused by the polythiazide. Possible side effects of these drugs are drowsiness and lack of mental alertness.

Accidents Involving Pilot Incapacitation from Cardiovascular Causes or Seizures 1970–1979*

Total Accidents	47
Accidents Fatal to Pilot	47
Accidents Fatal to Others	16
Fatalities	76

Note: In each case the pilot suffering the attack was a fatality. In one of nearly every three accidents, innocent persons were killed as a result of the pilot's incapacitation.

**Information taken from figures provided by the National Transportation Safety Board.*

The desire of pilots to maintain their medical certificate and continue flying in spite of disease symptoms which may be disqualifying is understandable. But falsification or suppression of essential facts concerning their condition is not only dangerous to the pilot but also a betrayal of the confidence of those who fly with him, as well as a potential threat to innocent persons on the ground. A pilot who suffers a fatal heart attack at the controls jeopardizes the lives of family members, who may be flying with him, in more ways than one. Any loss of life or properties, or injuries or damage suffered as a result of pilot incapacitation can result in huge financial losses from the pilot's estate, if it can be proven that he obtained his medical certificate on the basis of false statements.

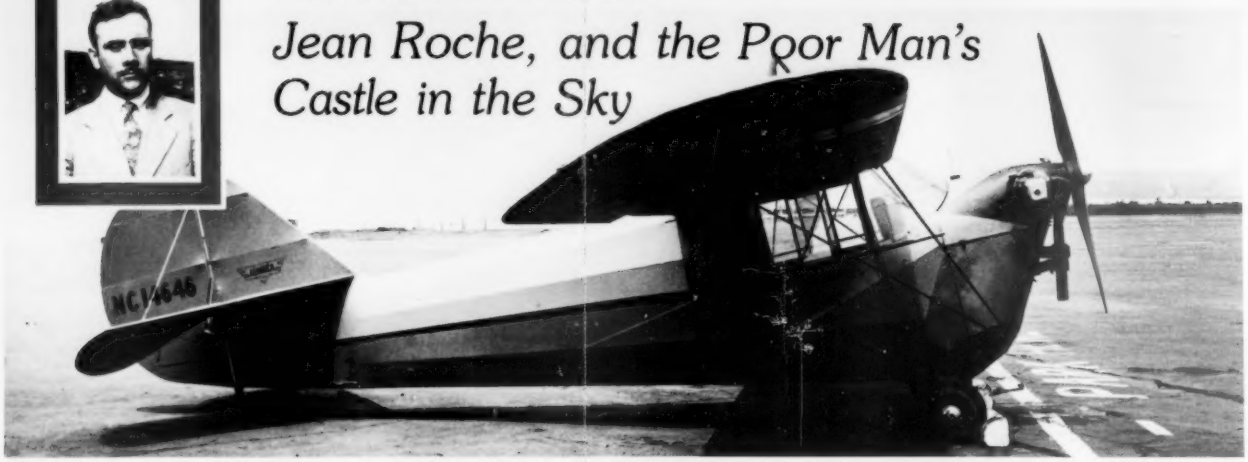
Any pilot who has been denied a medical certificate may be fully informed by the FAA flight surgeon of his region as to the steps open to him, either to appeal the findings or to seek a waiver. The onset of heart disease does not necessarily result in a *permanent* denial of the medical certificate. Prompt disclosure to your aviation medical examiner at the onset of any potentially serious disease, or use of drugs, will give you an early start on what may prove to be the road to renewal of health and re-certification.

Deceit is no way to deal with disease. ■

Federal Air Surgeon, Dr. Homer L. Reighard, believes in an "individual merit" attitude toward waivers or appeals from medical denials. Full disclosure of problems to pilot's medical examiner is best means of initiating a treatment program that could lead to re-certification.

Famous **FLYERS**

Jean Roche, and the Poor Man's Castle in the Sky



When you talk about popular airplanes you can usually associate their name with their creator. The Wright *Flyer*, the Piper *Cub*, the Cessna *Skyhawk*, or the Beech *Staggerwing* have immortalized an aeronautical pioneer. So how come the airplane and the person who practically invented general aviation is relatively unknown?

Ever hear of Jean Roche? Even if you have had the pleasure of flying the airplane he designed in the early 1920's, you would probably not associate it with this reticent French-born genius, who arrived in the United States in 1905 at age 12.

Jean settled in New York City with his mother (his father having remained in France). An aviation buff from the start, he haunted the airfields of New York where he met such celebrated airmen as Moissant and Bellanca. At an age when other boys wanted a bicycle or even a car he wanted only one thing—an aircraft. But the cost was prohibitive, cruelly so, he thought.

In his early teens he joined the New York Model Aero Club and won several awards for design characteristics of the models he made and flew. As a club member he was allowed to fly a Witteman hang glider which was based on Governor's Island until it was wrecked beyond repair. Jean decided to build a replacement glider using his own design, with foldable wings so it could easily be carried on the subway. Much to his mother's relief (her parlor was being used as a workshop) Jean finally gave up when he ran out of money to buy cotton for the wings.

Roche's first experience with powered flight nearly cost him his life. In 1910 he was allowed to test fly a "Demoiselle" monoplane built by linotype operator, George Beatty. He took off from homeplate at Yankee Stadium and with open throttle headed for the outfield, bounced into the air and flew a distance of about 10 feet at a height of an estimated eight inches above the ground. A fuel leak developed and fire broke out in the engine. Young Roche, who was soaked with gasoline from the overhead tank, bailed out just in time.

In 1911 the 17 year-old youth devised a pivotal airfoil system, linking rudder and aileron in a manner intended to stablize the aircraft in turbulent air. It took him three years to obtain a patent, only to find that manufacturers were not much interested in such safety devices.

Jean made one more try at home-building an aircraft in 1914, his own design of a canard (forward empennage) flying boat with pusher engine. His mother's parlor was again being used as a workshop—until the poor woman got fed up with the wood shavings everywhere and sold the hull to a motorboat racing enthusiast.

Frustrated in his efforts to acquire an airplane, Roche entered Columbia University and prepared himself for a career in aviation by obtaining a degree in mechanical engineering. After graduation he had no difficulty finding a position as an aeronautical designer among the many fledging aircraft manufacturers of the World War I period. With U.S. involvement in the War in 1917, Roche became chief of design and technical advisor to the Army Materials Division at McCook Field, Dayton, OH.

When the war ended, Roche remained with the Army where he designed and built a glider for the Army Air Service. Despite his being obliged, for the sake of economy to use the upper wing panels from a Curtiss *Jenny* he produced a successfully flown monoplane glider.

In the meantime another design was taking place in his mind. In an age when all the emphasis in aircraft building was on record-breaking speed, size, endurance, and all-weather capability—to satisfy the needs of the military, commercial aviation, and wealthy travellers—Roche was still nursing his boyhood dreams about an airplane which any man could afford to buy and learn to fly safely. Eventually there appeared on his drawing board an aircraft that was plump and slow, rather than sleek and fast. It was also simple to the point of being ugly and uncomfortable and apparently underpowered. But it would be *cheap*, and it would fly like a toy—"an automatically stable aircraft."

Building the aircraft in his spare time, with the aid of friends and colleagues, Roche produced an "A" shaped fuselage of tubular steel covered with fabric, surmounted with a "rags and wood" 36' single wing. Aiming at an empty weight of around 400 lbs., Roche was unable to locate the ultra-light engine he needed until an associate, Harold Morehouse, designed and built one to his specifications—a two cylinder horizontally opposed engine rated at 29 h.p.

The engine was installed by midsummer in 1925. While being tested on a taxi run by a fellow engineer, John Dohse, who was not a pilot, the aircraft became airborne unexpectedly. Dohse was able to circle the field and land without difficulty. Roche was delighted. Here was the plane that anyone could fly.

Over the next 12 months some 200 flights were made by Roche and others in his light plane without incident. All the pilots were lavish in their praise of its handling characteristics and optimistic about its future. But before Roche could arrange for factory production, the airplane was wrecked one day when Dohse attempted to fly the single seater with a passenger crammed in beside him.

Without a flyable example to exhibit, Roche was unable to interest any manufacturing concern in his "poor man's castle in the sky." Businessmen said he was reaching for a market that did not exist, that no one wanted a squat, bathtub-shaped flying machine that would only hold one person, etc., etc. Roche, having exhausted his own funds and the patience of his friends, put aside his plans reluctantly and concentrated on his job in the Army Air Service.

However, in 1928 Roche was contacted by the newly formed "Aeronca"—short for Aeronautical Corporation of America—which had decided to become the "first American company to build a truly light aeroplane." Arrangements were made to restore the wrecked model hurriedly, and a demonstration flight was made at Wright Field in Dayton.

While Dohse flew the plane in a flawless performance, Roche pointed out its unique advantages: an 11-1 glide ratio; a landing speed of 30 mph; a ground roll of 200 feet; ability to turn virtually within the length of the airplane; spin recovery within 1½ turns with released controls; exceptional stability; penny a mile economy. . . .

In this plane the promoters of Aeronca saw Everyman's wistful dream of a humble but serviceable flying machine, resting in a corner of his

barn or garage. They offered Roche an executive advisory position to oversee Aeronca production, plus 220 shares of stock, in exchange for all of his proprietory interests in the Roche light plane henceforth known as the Aeronca C-2.

The first production model rolled off the line in October of 1929. Except for the addition of overhead windows and brakes (the Roche original was stopped by a gloved hand on the landing gear wheel), the C-2 was an exact replica of the original. It was test flown and transported to Los Angeles in time for a public unveiling at the prestigious Western Aircraft Show in November.

Surprisingly, it was an instant success. Despite the bleak economic outlook, as the great economic depression of the 1930's began; despite the initial derision of professional publications who dubbed it the "Flying Bathtub;" and despite its obvious limitations (single wood seat, low speed, uninspiring appearance), the Aeronca C-2 won the hearts of a newly emerging segment of the American public, for whom this kind of airplane turned a dream into a possible reality.

While the high-powered speedsters caught everyone's eye at air shows around the country, it was the Aeronca C-2 that brought out the billfold and checkbook. A plane of your own for $1,500—reduced to $1,245 the following year, as the Depression worsened—a machine you could fly without possessing great skill or strength or mechanical knowledge—or financial backing! A craft with little or no commercial value, something to fly just for fun and solitary pleasure!

Ninety Aeroncas were sold in 1930, an unheard of number for a new airplane. There was just nothing like it in the market—but not for long. By mid-1931 there were no less than 23 new competitors in the field, including many short-lived ventures that quickly disappeared but also some which became familiar names in general aviation—the Cessna *Baby*, the Curtiss-Wright *Junior*, the Taylor *Cub*, to name a few.

This so-called "first wave" of light planes were faster, sleeker and more comfortable than the Aeronca C-2 but they had only one real advantage over the Roche design—room for two. General aviation was becoming a shared experience. Roche and Aeronca saw the handwriting on the wall, and hastened to comply. By March of 1931 they were in production on their C-3—essentially a C-2 with side by side seating for two and a heavier (36 hp) engine.

The C-3, dubbed the "Duplex" or the "Collegian," was just what every farmer's son wanted—an all-weather convertible flying flivver. The C-3 had a completely enclosed cockpit with removable door panels for summer operation. A 70' pasture strip would serve for takeoff, operation costs were less than those of many automobiles, and forward visibility was so good you could land the little plane on a dime. Orders poured in. Between 1931 and 1936, some 439 units were built.

In late 1931 Aeronca produced a third model, the C-1 clipped-wing *Cadet*, a single-seater aerobatic plane capable of withstanding 8.5 G's. Smaller than the C-2 or -3 but with 10% more horsepower, the *Cadet* promised to be the stunt pilot's delight. But its career terminated abruptly after only four units were built when Conrad Dietz, the company's general manager overstressed the wings in a demonstration flight and plunged to his death.

Other early production models included the C-2N *Scout* (actually a luxury model two-seater version of the C-2). The *Scout*, which could be rented profitably at $4.00 per hour, was an ideal primary trainer, and thousands of young Americans learned to fly in it during the 1930's.

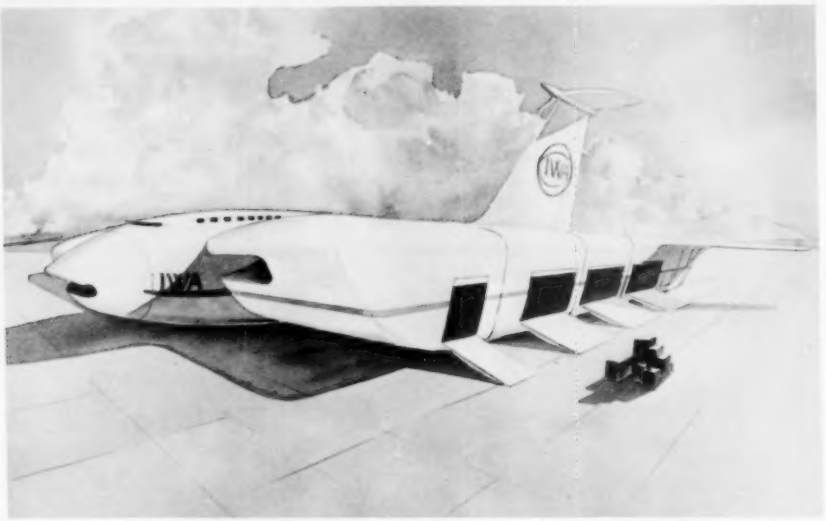
The basic pudgy fuselage shape remained until 1935 when the "razorback" appearance was enclosed to a round, nonstructural form. Later that year the C-70/80 low wing Aeronca racer was unveiled, with a 90 hp engine. The Aeronca line later continued with the two-seater *Chief* and *Champion*, and the four-seater *Sedan*, all high wing, but without the squat fuselage of the C-3. The "Ugly Duckling" was ugly no more.

Aeronca was heavily geared up for war production during the early 1940's, and in 1946, in anticipation of a greatly expanded airplane buyer market, produced over 10,000 civilian aircraft in 1946. The result was a market glut, that terminated their aircraft production completely. Manufacturing rights were sold to Bellanca, although the C-2 and C-3 would no longer be built, in view of modern certification standards. But the hundreds of familiar, tubby C-2s and C-3s in existence continued to enjoy an unequalled reputation for reliability, economy, and simplicity of maintenance that had made them an American favorite and unleashed a passion for personal flying that has been growing steadily ever since. By the time the original C-2 was located, restored and enshrined in a niche of honor at the opening of the Air and Space Museum in Washington, DC, in 1976 there were more than a half million general aviation pilots in the United States. Few ever visit the nation's capital without paying their respects to that airplane. The Aeronca seems so much a native product of America that most visitors are surprised to learn it was designed and built by a young French emigrant.

Jean Roche had retained his position in the Army Air Service, contributed many new ideas to aviation development, including, oddly enough, the design for an inflatable airbag to increase crash survivibility. Success of the C-2 and C-3 brought him great satisfaction but little money, and although he taught his three sons to fly, he advised them to get into banking for a livehood. As World War II approached Roche left Dayton to join the National Advisory Committee for Aeronautics at Langley Field, VA near Washington, DC.

Roche died at Hampton, VA on February 19, 1981. ■

The three musketeers of the inimitable C-2. Left-right, John Dohse, Jean Roche, Harold Morehouse.



INSIDE OUT WING. Is an airplane with an internal airflow wing the super fuel-efficient aircraft of the future? Its designer, 30-year old Robert Carr, a flight instructor and self-taught engineer from Oklahoma City, thinks so. His radical innovation is designed to increase the lift available from propulsion by forcing air through the hollowed out central section of a wing. Plans include a STOL version for air carrier/general aviation use that would carry 150 persons at Mach I speeds up to 7,500 miles non-stop.

FLEXIBILITY PROPOSED FOR CROSS-COUNTRY TRAINING

Private and commercial pilot applicants may find it easier to meet their cross-country requirements if a current Notice of Proposed Rule-making is adopted by the agency. The proposal would add some flexibility to the private pilot and commerical pilot requirements for long distance cross country flights.

In some areas of the country where flight schools are located, low-time students now often have to fly over or around large bodies of water or high mountains because of the requirements for a flight of at least 300 nautical miles with landings at least 100 miles apart. Similarly, the 600-mile three-landing roundtrip cross-country requirement for commercial applicants (61.129) is subject to the same problems.

Under the proposed change, private certificate applicants would still have to take the 300-mile trip with a minimum of three landings. However, only one landing would have to be made at a point 100 miles from the departure point. Other present mileage restrictions for the extended flight would be removed, allowing student and instructor considerable leeway in determining a route of flight that is safe for all concerned. Commercial applicants would continue to be required to make an extended cross-country with a minimum of three landings; however, they would be required to complete only one leg at least 250 miles from the departure point (150 miles for Hawaii). Similar changes are proposed for Part 141 (Flight Schools) requirements.

Comments on this proposal, NPRM 81-16, should be sent immediately in order to receive consideration. Copy of Notices of Proposed Rulemaking should be requested by name and rule number, from APA-430, 800 Indepenence Ave., SW, Washington, DC 20591. (Telephone number is 202-426-8058.) Comments should be sent to AGC-204, Docket No. 21371, same street address.

SAFETY IN AIR TRAFFIC

Preliminary accident statistics for 1981 support the view that the walkout of 11,000 controllers last August has not been allowed to downgrade aviation safety. For the five-month period August through December 1980, there was an average of 304 accidents per month, averaging 51 fatal accidents and 108 fatalities. For the same period in 1981 after the controller action, there was an average of 303 accidents per month, averaging 56 fatal accident and 113 fatalities.

PART 91 COMMENTS INVITED

The deadline for comments on proposals to reorganize Part 91 (General Operating and Flight Rules) of the Federal Aviation Regulations has been extended 120 days to April 9, 1982. The original deadline for comments was December 9, 1981.

Notice of Proposed Rulemaking No. 79-2A, proposed to reorganize and realign Part 91 so that each section or subpart will contain only rules that relate. Non-general aviation information would be purged and contained in five separate, new subparts. Commentary is invited.

Copies of notices are available from FAA, APA-430, 800 Independence Ave., SW, Washington, DC 20591. Comments should be sent to FAA, AGC-204, Docket No. 18334, same street address.

NEW WEATHER SLIDE SHOW

Pilots have a new weather education tool at their disposal. The recently completed slide show, *On Weather*, available for pilot seminars from the FAA Accident Prevention Program, is the first presentation of its kind to show weather systems realistically, as they would appear to the pilot in the cockpit. A cooperative effort by FAA, the General Aviation Manufacturers Association, and the National Weather Service, *On Weather* consists of four parts ("Signs and Hazards of Aviation Weather," "Frontal Systems," "Inflight Icing," "Typical Weather Penetration Scenarios") and contains 386 slides taken literally all over the world.

Contact your local FAA Accident Prevention Specialist to see when the showing of *On Weather* is scheduled for your area. A limited number of copies are also available for purchase at cost ($50) from Susan Gordon, GAMA, 1025 Connecticut Ave., N.W., Washington, DC, 20036.

COLLISION AVOIDANCE UPDATE

The third in a series of public meetings on the development of airborne collision avoidance equipment, held January 11 and 12 at FAA headquarters, reported continuing progress toward a workable system.

The agency is currently evaluating flight and laboratory test data for TCAS, the Traffic Alert and Collision Avoidance System, selected by Administrator J. Lynn Helms in June of last year as a back-up safety system to alert pilots in the event of a potential conflict. The TCAS concept, which would not be mandatory, includes a low-cost service for general aviation with estimated equipment costs of $2,500.

For reports of the meeting and announcement of the next scheduled conference (probably in June of 1982) contact Dr. Clyde Miller, FAA, ARD-240, 800 Independence Ave., S.W., Washington, DC, 20591, or telephone 202-426-0987.

LATEST AIRMAN PUBLICATIONS

Construction Safety

Maintaining safety on airports during periods of construction is the subject of updated advisory circular 150/5370-2B, "Operational Safety on Airports During Construction." The pamphlet contains advice for airport managers on safety considerations such as marking and lighting closed areas, service roads for construction vehicles, noise pollution, debris control, NOTAMing, etc. Free from DOT Publications Section, M-443.1, Washington, DC, 20590.

Airframe and Powerplant Tests

Updated study guides for the powerplant and airframe portions of the aviation mechanic written test are now available. AC 65-22A, "Aviation Mechanic Powerplant Written Test Guide," and AC 65-21A, "Aviation Mechanic Airframe Written Test Guide," can be purchased by sending check, money order, or major credit card number to the Superintendent of Documents, Government Printing Office, Washington, DC, 20402. The current price is $5.50 each but is subject to change without notice.

• Ultralight Evaluation

I am a student pilot 5½ hours in a Cessna 150!) and just received your sample copy. I liked it so much I subscribed right away. The NEWS is very interesting, and I particularly liked the "Night Fatique" article. What I would like to see is more on ultralights. As soon as I finish my pilot training, I want to build one. I would like to see an article on ultralight accident analysis, evaluation of designs, etc. Thanks again.

Bob Knebel
Naples, NY

Our article on flying ultralights is in the planning stage, and should be published this Spring. In the meantime you might look at a publication called Glider Rider, at P.O. Box 6009, 3710 Calhoun Ave., Chattanooga, TN 37401 or one entitled "Ultralight," published by the Experimental Aircraft Association, P.O. Box 229, Hales Corner, WI, 53130.

• News on the Up and Up

I enjoy your magazine and wish it came out more frequently. In the November/December 1981 issue the published subscription price is listed as $6.20 per year. But I recently received my renewal notice which gave the cost as $9.00 per year. What goes on?

N. W. Miller
Redlands, CA

P.S. I sent my check for $9.00 because I didn't want to miss an issue.

You think you were surprised?

Prices for FAA General Aviation News are determined by the Superintendent of Documents, U.S. Government Printing Office. Recently, the subscription prices of all government publications, ours included, were increased in line with rising costs. We did not receive notice of the increase until after the November/December issue went to press, but we have been assured that anyone who subscribes at the old price will receive their subscription and will be billed for the difference.

Bi-monthly publications leave something to be desired in timeliness, but saves considerably on mailing expenses and helps keep the subscription price down.

• Medical Reinstatement

In January 1981 I suffered an anterior myocardial infarction for which I was hospitalized about 10 days. Since that time I have been taken off all medication for my heart and have returned to work. My doctor says I am getting along fine, but informed me I have to wait two years to have my private pilot's certificate reinstated. This seems to be an excessive amount of time. Could you give me more specific information?

Richard Warner
Alexandria Bay, NY

The Federal Air Surgeon's office normally requires a two-year period following an infarction before considering certificating an airman. This is the usual amount of time for full recovery and stabilization of the heart disease. The interval has been reduced to a year for some patients who have undergone cardiac catheterization and coronary angiography and these tests did not reveal evidence of further problems. Consult your local aviation medical examiner or FAA office for details on how to apply for an exemption.

• Students and TCAs

Federal Aviation Regulation Part 91.90(2) states that at least a private pilot certificate is required to *takeoff* or *land* from an airport within a Group I Terminal Control Area. My question is, can a student pilot conduct a flight *through* a Group I TCA provided he has received an appropriate authorization from the Air Traffic Service and meets all other requirements of 91.90?

Larry Howard
Friendly, MD

Affirmative.

• O Solo Mio!

In the past year there have been a number of questions in the "Forum" regarding student logging of solo time, when he or she is the sole manipulator of the controls. My question is, can a student *legally* log solo time as PIC time?

By the way, I enjoy your magazine and find many of your articles and answers to be very useful. Keep up the good work.

Len Kastner
Whippany, NJ

Strictly speaking, a student can log sole occupant time only as solo time. However, after the student receives his private pilot certificate, he may apply his solo time as PIC time toward a higher rating.

• Sum of the Parts

In reference to the flight time requirements for an instrument rating under Part 141, as covered in the September/October 1981 "Forum," I believe the correct place to send a person for the answer is FAR 61.71 (a), not Appendix D of 141. An airman could also be going for an instrument rating under Appendix C, and again the only place to get the total flight time requirements is FAR 61.71(a).

Donald Paul
Veradale, WA

Flight time and aeronautical experience requirements for an instrument rating appear in Part 61.65(e). The same requirements for a combined instrument/commercial rating at an FAA-approved school appear in Appendix D of Part 141. The rule you cite, Part 61.71(a), details special rules regarding instrument ratings which apply only to graduates of FAA-approved flight schools. Incidentally, Part 61.123 covers general eligibility requirements for a commercial certificate.

• Viva Argentina

I recently came across a back issue of your magazine which I enjoyed. However, I found your article "Flying to Central and South America" (November/December 1980) somewhat inaccurate. The warning that VORs are virtually non-existent in Latin America is only partially true. The Argentine Republic IFR system serves almost 50 different airports with published instrument approach procedures. Many of these fields are provided with a combination of ILS, VOR, and ADF aids.

Weather stations are located at most airports and services are free. Although jet fuel is only available at major terminals, 80 and 90 octane is plentiful at any small field.

Regarding entry regulations, all you need is a 24-hour advance notice before arrival. Once you are in Argentine territory, all you have to do is file a flight plan at least one hour in advance of your intended departure.

We are proud of the efficiency and safety of our ATC system. Argentina is designated by the International Civil Aviation Organization as the official ATC Training Center for South America. I hope this may remove any doubts of U.S. pilots planning to go to my country.

Aljandro Tello
Santa Ana, CA

Our article on flying to Latin America was an overall commentary on conditions, which do vary from one country to another, based on pilot observations. It is good to hear that pleasant surprises await the visitor to Argentina.

FAA GENERAL AVIATION NEWS welcomes comments from our readers. No anonymous letters will be used, but names will be withheld on request. Address: FAA GENERAL AVIATION NEWS, AFO-807, Washington, D.C. 20591.

• Uncontrolled IFR?

Since the "General Aviation Reservation" system went into effect, I am finding it very difficult to get an IFR clearance or reservation. Consequently, I have been tempted to fly IFR in uncontrolled airspace. Please clarify how best to do this safely, since controlled airspace begins here on the east coast at either 700 or 1,000' AGL. Also, what is the best procedure for low-level air navigation using electronic NAVAIDs? Finally, please clarify any regulations in Part 91 that I should know about so I can fly legally.

Name withheld
Arlington, VA

IFR flight in uncontrolled airspace is not prohibited by regulation. (see Part 91.) As long as the pilot is IFR qualified, and the aircraft is appropriately equipped, he may fly in uncontrolled airspace in instrument meteorological conditions. However, because of terrain hazards, unreliability of NAVAIDs at low altitudes, and absence of traffic separation, it may not be possible to do so except in a careless or reckless manner—which is a violation of Part 91.9 of the Federal Aviation Regulations.

• A Yank in the Canadian Airspace

Recently in Kingston, Ontario, I rented a *Cherokee* for a local flight in Canada and was informed that my U.S. private pilot certificate was not valid for a solo in a Canadian certificated aircraft. Subsequently, I was obliged to have their equivalent of a CFI on board. While this may be understandable, I did find it difficult to believe that their regulations also precluded allowing me, after a check ride, to fly solo under student pilot privileges. This made me wonder about Canadian pilots in the U.S. Do we let them fly here?

C. B. Fish
Hanover, PA

In order to exercise the privileges of your airman's certificate in Canada, you must first make application to one of their Ministry of Transport's regional offices, presenting your U.S. pilot's certificate and medical. The Ministry will then issue a tourist permit, subject to the same limitations as the U.S. pilot certificate. There is a similar process for Canadian (or any foreign) certificated pilot wanting to fly in the U.S.

• Human Factors

In the November/December 1981 "Forum" one of your readers made reference to a book "The Human Factor in Aircraft Accidents" by David Beaty. The local book stores do not have it and do not know how to order it. Do you have any further information that would help me obtain this book?

Daryl Atkinson, MD
Salem, OR

Originally published in 1969, Beaty's book is probably out of print. However, the publisher can be reached at Stein and Day, 7 East 48 St., New York, NY, 10017.

INSTRUMENT CORNER

• Instrument Time on Top?

According to FAR 61.51(c)(4), I can log as instrument time only that time I operate the aircraft solely by reference to the instruments. But—what if I'm flying on top of an overcast with good VFR visibility but with no horizon (i.e., earth obscured by clouds) with no visual contact with the ground (navigating by instruments)? Can I log this as instrument? Yes, I'm instrument rated and current, and the aircraft is instrument equipped.

Pete Palmer
Butler, VT

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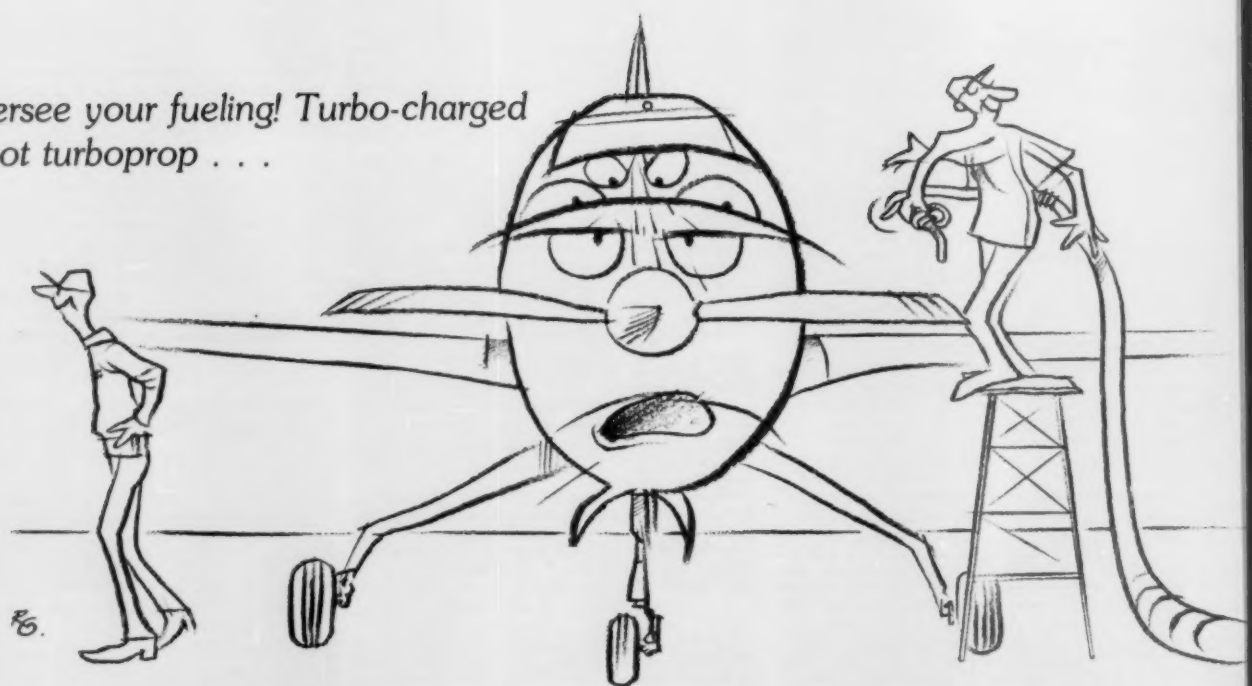

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